

This listing of claims will replace all prior versions, and listings, of claims in the application. .

Listing of Claims:

Claims 1-4 (previously cancelled)

5. (four times amended) A process for detecting ~~toxins~~ a toxin in a biological sample, said process comprising

(a) ~~bringing together~~ contacting a biological sample containing a toxin and obtained from the group consisting of animal, plant and bacterial biological samples, under in vitro conditions, with
5 antibodies to a Lethal Toxin Neutralizing Factor, said antibodies being made

~~(1) an anti-LTNF made~~

against a synthetic peptide consisting of at least five amino acids of

SEQ ID NO: 1, or

against a natural Lethal Toxin Neutralizing Factor protein isolated from opossum
10 serum and having a molecular weight of 68 kDa and containing SEQ ID NO:

1.

~~with~~

~~— (2) at least one unneutralized biological toxin derived from animal, plant or bacteria,~~
to cause an immunological reaction directly between the anti-LTNF and the at least one
15 ~~unneutralized biological toxin and to produce an immune complex, a product capable of being~~
~~detected by ELISA; and~~

(b) after said contacting, detecting the immune complex formed between the toxin and the antibody product of such reaction by ELISA.

Claim 6 (previously cancelled)

7. (four times amended) A process as in claim 5 wherein the ~~anti-LTNF antibodies~~ and the ~~toxin biological sample~~ are brought together ~~contacted~~ in a procedure wherein the ~~anti-LTNF is antibodies~~ are in a fluid state and the ~~a lethal toxin comprises a lethal toxin which~~ is attached to a plate, to produce the ~~product capable of being detected by ELISA immune complex~~, said process further comprising

conducting an ELISA ~~color assay~~ on the product of the immunological reaction ~~immune complex~~, and

obtaining a numerical result which is roughly proportional to the lethal dose of the toxin as determined by animal bioassay.

8. (Twice Amended) A process as in claim 5 wherein the ~~biological~~ toxin is contained in a fluid selected from the group consisting of food, blood sera and other body fluid, saliva, urine and milk, and the ELISA is carried out by antigen capture format.

9. (six times amended) A method for ~~numerically assessing the neutralizing potency assaying free toxin in a sample, wherein said sample is a mixture of a partially neutralized toxin of and a specific anti-serum made against a the toxin for which it is specific~~, said method comprising

determining a ~~neutralizing index for the anti-serum against the toxin, said neutralizing index being given by the difference between~~

~~(1) a numerical assay value for a predetermined amount of a toxin in a normal serum in a first test, and~~

~~(2) a numerical assay value for a mixture of the contacting a predetermined amount of the toxin plus a predetermined amount of the specific anti-serum in a second test,~~

10 wherein the toxin assay is determined by ELISA test of the toxin plus normal serum in the first test;

and the toxin plus anti-serum assay is determined by ELISA test of the mixture of the toxin plus the anti-serum; to form the such mixture containing a reduced amount of free toxin due to partial neutralization by the specific anti-serum, ~~in the second test;~~

15 wherein contacting the mixture with an anti-LTNF comprising an antibody made

(1) against a natural LTNF, Lethal Toxin Neutralizing Factor protein isolated from opossum serum and having a molecular weight of 68 kDa and containing SEQ ID NO: 1, or

20 (2) against a synthetic peptide consisting of at least five amino acids of
SEQ ID NO: 1

is used as a reagent for the ELISA tests and reacts directly with to form an immune complex with the free toxin remaining in the sample, and ~~in both the first test and the second test, and does not react with neutralized toxin in the second test;~~

25 wherein the numerical assay values in both the first test and the second test are given assaying the immune complex by ELISA color assay for anti-LTNF, and

wherein an anti-serum having a higher neutralizing index is indicative of a greater potency for that anti-serum against a given toxin.

10. (Four times Amended) A method as in claim 9 wherein the ~~anti-serums are anti-venoms~~ specific anti-serum is made against a venom.

11. Canceled

12. Canceled

13. Canceled

14. Canceled

15. (Twice Amended) A process as in claim ~~14~~ 5, wherein the antibody is made against a Lethal Toxin Neutralizing Factor ~~LTNF having a non-immunological binding with toxins such that its antibody has the property of being able to react and reacts~~ immunologically in vitro with a wide range of biological toxins.

16. (Twice Amended) A process as in claim ~~15~~ 5 ~~wherein said ELISA which~~ is carried out according to an ELISA double-sandwich method protocol.

17. (previously cancelled)

18. (Once amended) A process as in claim ~~14~~ 5 wherein the antibody is made against a peptide consisting essentially of at least a 5 amino acid portion of SEQ ID NO: 1.

19. Canceled